

The Bridge



A quarterly newsletter from Michigan's Local Technical Assistance Program

Vol. 29, No. 4 – Spring 2016

For structurally sound roads in need of a face lift, HIPR may be the way to go. HIPR reduces construction time and may be less expensive than traditional repair methods.



Out with the Old, In with the Recycled

Stephanie Hubble - Technical Writing Intern
Center for Technology & Training

Photo credit: John Klefer

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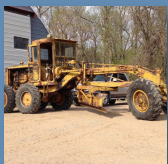
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A spider web across the lane from years of traffic; a second pre-heater rumbles over the softening asphalt before tines scarify the now crumbling road. Rejuvenating oil is added, mixed with the old asphalt, and re-compacted. This process, with minor variations depending on the project, is hot in-place recycling (HIPR).¹

HIPR is “the process of correcting asphalt-pavement surface distress by softening the existing surface with heat, [either scarifying or] mechanically removing the pavement surface, mixing it with an asphalt binder, and replacing the recycled material on the pavement without removing it from the original pavement site.”² What made HIPR the best technology for one Michigan road?

According to Lance Malburg, Dickinson County Road Commission (CRC) Engineer, “HIPR is a valuable, but little used tool in the road preservation toolbox.” Malburg understood that HIPR has a time and place. “You have to look at the road. You don’t want something that’s completely failed. Cracked, yes, but not all patches.” Pine Mountain Road-Westwood Avenue, located in Kingsford, Michigan, and Breitung Township, had a PASER of 3 or 4 with some patches of PASER 2 and a fairly consistent asphalt depth.

Malburg first learned of HIPR in the mid 1990s while working for the City of West Chicago (Illinois). At this time, HIPR was still proving its worth, but the principle behind the process fascinated Malburg. As Malburg’s career took him to other local agencies, he kept looking for ways

to use HIPR on a project and to try new HIPR innovations. Then, in February 2014, Malburg learned about a way to fund a project with HIPR through an Accelerated Innovation Deployment (AID) Demonstration grant.

AID Demonstration grants stem from a branch of the Technology and Innovation Deployment Program (TIDP), an FHWA program made possible by MAP-21. This grant covers a percentage of the project up to the full cost, as long as the total is less than \$1,000,000 and is open to any project that is eligible for assistance under Title 23 U.S.C. Of course, projects that use Every Day Counts (EDC) initiatives are encouraged as well as other aspects of highway transportation addressed by the TIDP.³

Because of the focus on innovation and development, Malburg wanted to be sure that the results of any project done with AID funds would be visible to the public. This made the Pine Mountain Road-Westwood Avenue project a perfect candidate, both because Pine Mountain Road-Westwood Avenue hadn’t completely failed and because Dickinson CRC feared it wouldn’t have the necessary funding to repair the road before it completely failed.

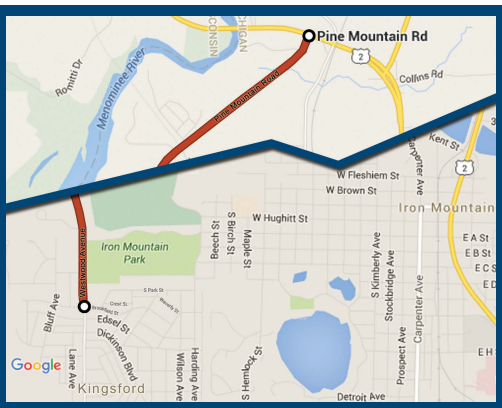
“The application for an AID grant isn’t difficult. Most everything has templates, even the narrative where you describe your project,” Malburg stated. However, local agencies are not able to apply for AID grants directly; requests have to go through a state department of transportation. Local agencies are only able to apply through state DOTs as sub-recipients. This means MDOT has people—like MDOT Engineer

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As the poet Robert Penn Warren once said, "History cannot give us a program for the future, but it can give us a fuller understanding of ourselves, and of our common humanity, so that we can better face the future."

Pine Mountain Road: red road in top map; Westwood Avenue: red road in bottom map.

The project covered 4.2 miles of road between the points illustrated on the maps (right) in the city of Kingsford and Breitung Township (Dickinson County), Michigan (Map data 2016 Google).



of Operation Field Service Division, Mark Geib⁴, who was able to help Malburg—ready to help local agencies and pass on grant applications to FHWA.

"The FHWA staff was a big help," Malburg said. After the application was submitted, FHWA called Malburg and asked if Dickinson CRC would try something a little bit different. Regarding the change, Malburg said, "They asked about whether the project needed the 1-inch hot-mix asphalt (HMA) top course we proposed and I explained our research in HIPR shows only slight improvement in the ride. FHWA staff said a 3/4-inch ultrathin warm-mix asphalt (WMA) would work and qualify for additional funding under AID grant requirements." The WMA overlay gave Pine Mountain Road-Westwood Avenue a smoother finish as well as several other benefits.

WMA is an EDC⁵ initiative that can reduce project costs and keep production temperatures lower than more common HMA methods. In fact, many WMA technologies are already used to improve asphalt binder viscosity and density. The only difference between HMA and WMA is the introduction of a foaming agent—water or other chemical—into the HMA process. This agent can help contractors reduce heat, but Michigan WMA specifications do not require any specific reduction in temperature. The contractor for the Pine Mountain Road-Westwood Avenue project reported that WMA saved 0.1 to 0.2 gallons of heating oil per ton, which may not seem like much, but ended up saving 500 gallons of oil.

With a traditional repairs of this extent, lane closures are usually anywhere between 5 to 8 days for every mile of construction. With Dickinson CRC's HIPR and WMA overlay lane closures were 3.3 days per mile. This meant, instead of nearly 30 days of construction, the Pine Mountain Road-Westwood Avenue project only saw lane closures for 14 days spread over the 4.2 miles of the project.

Traditional repaving methods used by Dickinson CRC also cost

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Tines scarifying the Pine Mountain Road (Photo credit: John Kiefer)

Although I am a professional technical writer with many years of industry experience, I did not write a word of the first sentence that I have used to introduce myself to you.

Behind the scenes here at *The Bridge*, our writing team scribbles out hurried rough drafts. These drafts get revised and refined...and revised and refined some more. Along the way, however, we lose some of our darlings—cool quips that we penned and dearly love that, in the end, really do not fit in a given article.

The sentence quoting Warren's words was one of Cassandra Matchinski's darlings that did not survive in her article for this issue. Over the past few years, Cassandra has been a part of the Michigan LTAP story. On our technical writing team, Cassandra is unparalleled in her understanding of content that is appropriate for and worthy of *The Bridge*. She is also our resident expert on Adobe RoboHelp and is teaching our interns everything she knows about documenting Roadsoft using RoboHelp. Cassandra creates outreach materials like banners, posters, flyers, and graphics that capture the spirit of CTT. And, she has built relationships in the transportation industry—she has been integrated into our team, has met a number of you at Winter Operations Conference in 2015, and has corresponded with several of the people mentioned in *The Bridge* in the past few years.

As a new employee, I find my most valuable associate has been Cassandra. Half of the battle in adjusting to a position in a new workplace is learning how to navigate the organization's resources and culture. Cassandra and I—who both serve as full-time technical writers and as editors for *The Bridge*—have adjacent cubicles. So, it is easy for me to talk with Cassandra and learn about the organizational culture of Michigan LTAP and CTT from her.

But, Cassandra took on this job as a student and just graduated this past December. While she is with us full time until the end of spring semester, she will be leaving us to move to Minnesota. Having her here to transmit her knowledge of Michigan LTAP and CTT history is giving me a fuller understanding of our current common goal: the Michigan LTAP mission and CTT resources and culture. The organizational history that Cassandra is sharing with me is preparing me to continue communicating the Michigan LTAP and CTT message. What Cassandra's darling captured from Warren's writings was right!

Two of the articles in this issue of *The Bridge* deal with experts leaving a workforce but giving their protégés a fuller understanding of the organization's mission and goals. In this issue, we are sharing with you what some local agencies are doing to transition new employees into roles that have been left vacant by invaluable retirees. And, we are spotlighting Ken Skorseth, who is retired but continues to share his tacit knowledge of gravel roads with South Dakota LTAP.

We are also capturing some knowledge about hot in-place recycling of asphalt and bridge asset management resources. Lance Malburg's HIPR project in Dickinson County came to fruition because of the knowledge he's gained about the technology over the course of his career. With the help of MDOT resources, he was able to set the project in motion. Transferring knowledge like this advances our common goal of better and safer Michigan roads.

Victoria



Photo credit: Dr. Zhanping You

Paving the Way for Your Successor

Cassandra Matchinski – Technical Writer
Center for Technology & Training

Have you ever worked with someone whose passion for their work was obvious even after years in the same field? Perhaps they're the agency expert on operating a special piece of equipment, or they can build just about any solution from the shop's scrap box. They can be relied upon to have an answer for any question, and they've likely got a great story to go with it.

When that person retires, it can leave an agency with a large gap that's hard to fill. Even a new employee with plenty of applicable experience can't completely replace years of on-the-job training and building professional relationships. Without a plan to pass down that knowledge, agencies can let a valuable asset slip away and put a lot of extra pressure on a new employee. According to the Bureau of Labor Statistics, the 55–64 year age group will make up 25% of the work force by 2020 – meaning it's more important than ever to prepare for retirements and preserve institutional knowledge.

“When it comes to retirement, there are usually two types of turnovers,” says John Daly, managing director of Genesee County Road Commission. The first, he says, is more desirable but rarely occurs, and that's when a new employee can begin working before the predecessor leaves, allowing them to overlap and interact while the new employee settles into the position. The unique thing about this type of training is that it allows a retiree to share tacit knowledge, or the things they've come to know over years spent fulfilling their position duties. Craig Bryson, senior manager of communications and public information at the Road Commission for Oakland County,

explains that this type of overlap doesn't usually occur because of budget constraints and the often long process for selecting a new employee. “That would be the ideal situation,” says Bryson, “but often it just isn't an option.”

The second type of turnover occurs when a new employee steps into a role after the successor has retired. For a large agency like the Genesee County Road Commission, the solution lies in documenting everything a new employee will need to know about their position. When an employee plans to retire, John Daly and his department heads sit down with that person, and together they document the position description, important contacts (and the professional relationship with those contacts), and what Daly calls the “hot button items,” or the information that a new hire will need and may not find documented elsewhere. “It's basically the survivor's guide to the first 90 days on the job,” says Daly.

Not every agency has such a well-defined system in place, and even if they do, a sudden retirement can offer a challenge. Bill Conklin of Ingham County Road Commission, faced that challenge when he stepped into his role as managing director. “When I arrived,” he says, “the previous manager had retired about six months prior, and the interim manager had left a few weeks before.” After being shown around on his first day, he was tasked with diving in and figuring out how to best do his job. One thing that helped him to understand his role better, as well as the culture of the road commission, was the occasional retirement celebration. Hearing on-the-job stories and experiences from retired supervisors was very useful to someone new to the job, and

there are benefits to the social aspect of such a gathering. “Retirement celebrations are great because other retirees tend to come to them and socialize, and it keeps them feeling connected,” says Conklin. Establishing and maintaining those connections with retirees can pave the way to inviting them back to share their knowledge or assist with training.

Craig Bryson agrees that retirees are valuable assets when it comes to on-the-job training and education. “We've asked retirees back to assist with our brine well operation, or as part-time winter maintenance crew members. Some senior-level managers return regularly to share their knowledge with successors.” Regardless of the topic at hand, having an expert who knows the crew, the equipment, and the jurisdiction is invaluable. Inviting retirees for an annual summer picnic, occasional coffee and doughnuts, or to retirement celebrations can help to maintain those relationships in the future – when questions arise or training is needed, having a direct line to the right person can save a lot of time. Whether or not retirees are considered experts in any one thing, providing them with a process to share what they've learned on the job will help the next person hit the ground running. No matter the size or function of your agency, your senior employees are bound to have knowledge and experience that can be a valuable asset.

If your agency is looking to develop a transition plan, try using upcoming retirements as trial runs to find what works best for your retirees and new employees, and allow them to give input on how to improve the process for the next person. If you'd like to share your agency's successful transition plan or if you aren't sure where to begin, we'd love to hear from you. Email us at ctt@mtu.edu with the subject line “Paving the Way for Your Successor,” and feel free to share or ask questions. ■

Inviting retirees for an annual summer picnic, for occasional coffee and doughnuts, or to retirement celebrations can help to maintain those relationships in the future.



Zilwaukee Bridge

The Need for Bridge Asset Management

Rebecca Curtis – Bridge Management Engineer, MDOT
Chair of TAMC Bridge Committee

An analysis of bridge conditions in Michigan shows that state and local bridge owners and decision makers are continuing to “hold their own” despite rising costs and revenue challenges. From 2004 to 2012, the overall network of bridges in the state saw a slight but steady improvement in overall condition. However, from 2012 to 2014 the percentage of bridges in good condition has stagnated as rising costs and an increasing inventory of fair bridges creates a large preservation need.

The figure summarizes the percentage of Michigan bridges in good, fair, and poor condition for the years 2007-2014. This condition is measured based on the minimum condition rating for the National Bridge Inventory (NBI) components—deck, superstructure, substructure or the culvert rating—where any ratings of 4 or less would be considered poor, 5 or 6 are fair, and 7 through 9 are in good condition. Although the

trend-line for the poor category is decreasing, the good category is plateauing and the fair category is increasing. Without sufficient revenue dedicated to bridge preservation and implementing an effective preventative maintenance strategy, those bridges located on the fair-to-poor borderline are in danger of dropping into the poor category.

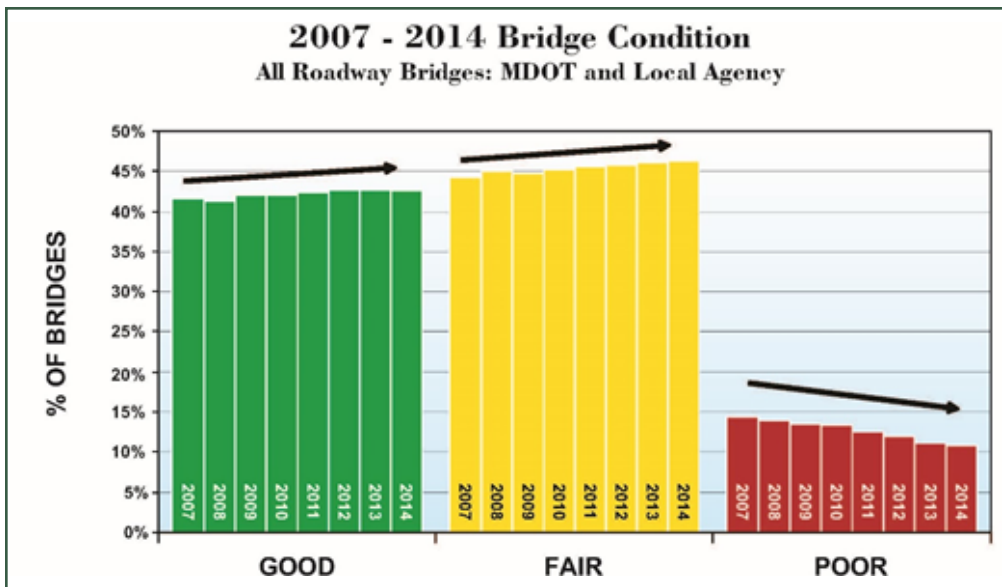
A sound bridge asset management program is the best way to identify how much revenue is required to maintain or improve bridge condition as well as to determine the most efficient and effective way to invest that revenue. Two aspects of asset management are network and project level analyses, and each provide their own benefits. Project level analysis is more specific to each bridge. Project level analysis is used to manage the condition of specific bridge elements and to determine the right fix at the right time on a particular bridge in order to achieve the lowest cost over its lifespan.

Project Level Analysis

In project level analysis, the practitioner evaluates the bridge condition and inspector work recommendations and categorizes the current bridge needs into preventive maintenance, rehabilitation, or replacement work categories. Using average cost data, the potential project cost can be estimated. Additionally, the practitioner can create alternate scopes of work, calculate the cost and expected condition benefit, and then perform life cycle cost comparisons in order to determine the right fix for the current condition of the bridge.

MDOT has developed tools to assist local agencies and their consultants in performing these project level analyses. MiBRIDGE is the statewide system that allows for input of inspection data – not only to meet the requirements of the National Bridge Inspection Standards, but also for use in managing the local agency assets. We recommend the collection of element-level inspection data which, in addition to NBI component condition can be collected in MiBRIDGE as it aids in identifying the work needs on a specific structure. On the Bridge Management and Scoping webpage (which may be accessed from the MDOT Bridge Operations or the TAMC website), MDOT provides a cost-estimating spreadsheet for bridge projects, a life-cycle cost-estimating spreadsheet, and deck preservation matrices.

As deck condition tends to drive a majority of project selections within our state, MDOT developed a preservation matrix for decks. By analyzing network-wide data, using network asset management and looking at life-cycle costs of typical structures, guidelines for use in project selection were created. The findings are summarized in two deck preservation



Source: TAMC 2014 Annual Report

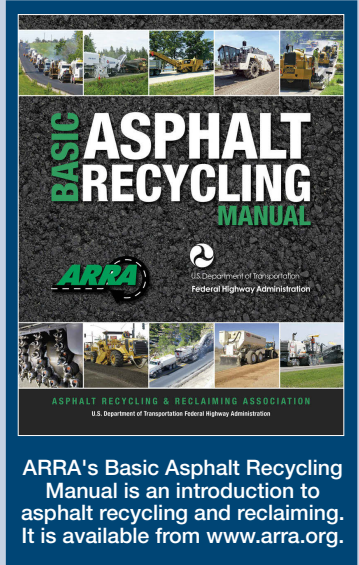
more than this HIPR project, even with the need for an overlay. For the Pine Mountain Road-Westwood Avenue project, HIPR with a WMA overlay cost approximately \$189,000 per mile versus an estimated \$380,000 per mile with a traditional crush, shape, and pave project. The total project cost was \$790,000—\$760,227.69 for construction and \$30,000 for engineering, documentation, and testing. Overall, this added up to a savings of over 40% for the Pine Mountain Road-Westwood Avenue project.

Before Malburg could have a successful project, he needed to gain community support. Support was gained through technology transfer, or how new technology is passed between inventors, scientists, and engineers—like Malburg—to end users—like the people using Pine Mountain Road and Westwood Avenue every day. Not only is technology transfer an integral part of the AID grant process³, but technology transfer keeps the public informed of innovations that help the community. He was able to facilitate technology transfer through town

hall meetings, articles in local papers, and project showcases. “Surprisingly, I had little trouble getting local approval for the Pine Mountain Road-Westwood Avenue project,” Malburg states. This answer most likely had something to do with the lengths taken to inform the community about the innovations used on this project.

Even though the asphalt has cooled, it doesn't mean this project is over. One of the most important parts of trying something new is seeing how it lasts. Malburg and the Dickinson CRC will continue monitoring Pine Mountain Road-Westwood Avenue each year, using photos to see how it handles stress, and compare the results with similar roads using traditional treatments.

“I'm proud that our project is on the cutting edge and in the Upper Peninsula of Michigan,” said Malburg. Initiatives like Malburg's show that counties, cities, and local agencies can come together to apply innovative roadway technologies throughout our pleasant peninsulas. ■



ARRA's Basic Asphalt Recycling Manual is an introduction to asphalt recycling and reclaiming. It is available from www.arra.org.

1. HIR and RIP are other common abbreviations.
 2. http://www.martec.ca/media_room/files/technical_papers/Toronto-97.pdf
 3. Requirements and submission info: <https://www.fhwa.dot.gov/innovation/grants>.

4. Mark Geib is not the current contact for AID grant assistance with MDOT.
 5. <https://www.fhwa.dot.gov/innovation/everydaycounts/about-edc.cfm>

► The Need for Bridge Asset Management, *continued*

matrices; one for black reinforcing bars and one for epoxy coated bars and can be used to provide guidance on the timing of preservation actions of our existing bridges similar to a lifecycle analysis. This document allows all bridge practitioners in Michigan to benefit from the network analysis without having to run the analysis themselves. To use the chart, the practitioner looks at the condition of the deck top and bottom surface and then follows the row with the correct condition over to identify the repair option, the potential result of the repair, and the anticipated fix life.

the TAMC calculates the probability of deterioration of the network of bridges, compares it to the investment in projects on our bridges, and predicts future network condition levels. The council uses the network analysis to provide future condition information on a statewide basis as part of the Annual Report.

In addition to evaluating the impacts of project selection, BCFS has been used to demonstrate the value of preservation. For example – what would have happened if Michigan local agencies had not begun to adopt bridge preservation and, instead, had continued down the path of worst first? Network analysis allows us to model both situations. The top

line in the figure is measured condition. As TAMC was able to communicate the benefit of preservation to local agencies, the deterioration rates actually slowed as preservation projects and rehabilitation projects prevented bridges from falling into lower conditions. This slowed the deterioration rates of the local bridges over time. The darker, lower line is the condition that was predicted using the actual budgets in the years under review, but using the transition rates before the push toward bridge preservation and a mix of fixes. The difference in condition predicted in this chart is one more tool that can be used to communicate the value of preservation. ■

2016 Asset Management Guide for Local Agency Bridges Training Course

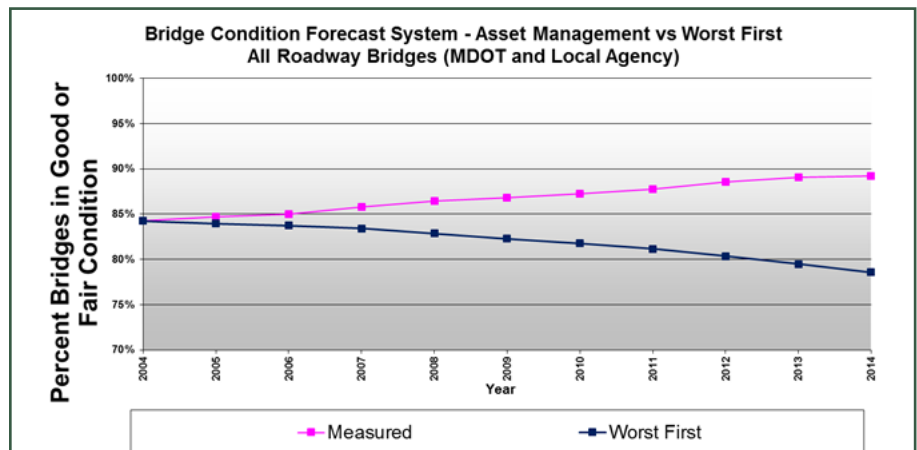
will be offered at three locations this fall. Contact the CTT for more information.

MDOT's Bridge Management & Scoping Resources:

<http://tinyurl.com/hub6l3l>

Network Level Analysis

Network level analysis analyzes the network-level conditions, funding needs, and preservation effectiveness of a population of bridges. Using an internally developed spreadsheet—the bridge condition forecasting system (or BCFS)—MDOT on behalf of



Source: TAMC 2014 Annual Report

LTAP's Gravel Guru: Ken Skorseth

Victoria Sage - Technical Writer
Jordan Dagenais - Technical Writing Intern
Center for Technology & Training

Ken Skorseth really enjoys “just going out and playing in the dirt” with his 1945 Caterpillar motor grader. That “old motor grader”—a Father’s Day gift from his son—testifies to the passion that Skorseth poured into gravel road education during his career serving Local Technical Assistance Programs.

Neither gravel road engineering nor education initiatives were on Skorseth’s mind when he was growing up in South Dakota. His hope for a career in big construction came from two influences: an uncle, who worked at an asphalt paving construction company, and a childhood hero, who was a “dear family friend...[working in] construction during the interstate construction era.” While he was still finishing high school, he ambitiously pursued his construction goals by completing a technical college degree at night at Minnesota West Community and Technical College. He then studied heavy equipment operation and maintenance, and construction staking and surveying at Associated Schools of Miami, Florida. He also studied speech communication. By 1971, Skorseth began working in construction holding such varied positions as heavy equipment driver, foreman, and part-owner of a construction company.

In 1989, while Skorseth was working as a public works manager, South Dakota Local Technical Assistance Program (SD LTAP) approached him for help. LTAP centers along with the Tribal Technical Assistance Program (TTAP) centers form a national network that serve transportation agencies.¹ Their mission



Ken Skorseth

includes training and educating transportation agencies on new and existing transportation-related technologies and advancements. That mission resonated with Skorseth, who agreed to assist the SD LTAP for two years. But, he was struck by the “incredible need for assistance to local agencies: very few of the counties, very few of the smaller cities and towns, and no townships [had] in-house engineering staff.” A dire need for the local agencies in his area was information for maintaining their gravel roads.

“Gravelology”²

A high percentage of South Dakota’s road network is gravel. At the SD LTAP, Skorseth faced many questions from local South Dakota agencies about their gravel roads. But, the lack of gravel resources left him with little to provide these agencies. Skorseth began writing a manual for gravel roads in 1998 in order to equip local agencies and elected officials with information that they needed for better maintaining their gravel roads.²

The two-year project was complicated by the lack of resources. “As a result,” said Skorseth, who collaborated with Ali Selim on the project, “the manual was developed from scratch.” The Gravel Roads Maintenance and Design Manual functions as “a comprehensive guide for maintenance and rehabilitation, drainage techniques, surface gravel options, dust control and stabilization, and other innovations,” explains Skorseth.

Since 2000, his gravel roads manual has been leaving its mark—it’s serving as an “invaluable resource for managing gravel

surfaced roads throughout the nation and other parts of the world”, according to the Federal Highway Administration and SD LTAP.³ In the United States alone, approximately 35 to 50 percent of roads—or 1.4 to 1.6 million miles—are dirt or gravel.^{3,4} Additionally, budget constraints prompt some agencies to revert their failing paved roads back to gravel.³ The gravel roads manual, which has found its way into academic engineering courses, equips LTAPs and the agencies they serve with comprehensive information to address the maintenance and design of the nation's gravel roads.

The LTAP Difference

One key objective for Skorseth was to translate the technical information for doing gravel road maintenance “right” into an easily understood and usable manual for local agencies.⁴ Skorseth’s deep desire to provide local agencies with the engineering principles necessary to maintain their own road systems impelled him to stay at SD LTAP for 26 years. Even though he is now retired and dedicating most of his time to family and



The 2015 Gravel Roads Construction & Maintenance Guide³ is an update of Skorseth and Selim's 2000 edition of the Gravel Roads Maintenance and Design Manual².

1. From: www.LTAP.org/about/.

2. Term used for a webcast, *Get Schooled in Gravelology*, by Steve Jenkins and Ken Skorseth, Forester University

3. From: Skorseth, K., Selim, A., FHWA, and SD LTAP. Gravel Roads: Maintenance and Design Manual. Washington, DC: US DOT and FHWA, 2000. p. viii. (trid.trb.org/view.aspx?id=690799)

4. From: US DOT and FHWA, August 2015 Gravel Roads Construction & Maintenance Guide, p. ii, viii. (www.fhwa.dot.gov/construction/pubs/ots15002.pdf)

5. From: Center for Environmental Excellence by AASHTO, NCHRP Project 225 (04) (http://environment.transportation.org/environmental_issues/construct_maint_prac/compendium/manual/5_8.aspx).

6. From: <http://www.sdstate.edu/engr/ltap/>

“that old motor grader”, he still allots a few hours each week to work as a special projects manager for South Dakota LTAP. He continues to advance their mission of transferring “the latest highway and bridge technology into understandable terms for local government entities throughout the state.”

The nationwide network of LTAP and TTAP centers has the advantage of being able to share their resources and experts, like Ken, for aiding transportation agencies in their regions. He has been a presenter at the Annual Regional Local Roads Conference, state-level LTAP conferences, and the national LTAP/TTAP conference. Individual LTAPs, like Michigan LTAP and Minnesota LTAP, have also called upon Skorseth to assist with their gravel roads training classes, aerial assessments of gravel roads, and video trainings. In addition to receiving statewide honors for his contributions to industry, Skorseth has been an invaluable resource for the LTAP and TTAP community at large.

Skorseth's Impact

A good surface transportation system is “critical...to competitiveness in a global economy”, explains Skorseth. As he sees it, the legacy of his LTAP work has been ensuring “a good surface transportation system—including gravel roads—so that we could move goods” and safeguard our economy.

What would Skorseth recommend to someone hoping to better our surface transportation system? “Learn everything you can about your job,” he said. “If you are a laborer or a truck driver or a heavy equipment operator or a foreman, a manager, an engineer—it doesn’t matter what level—just learn everything you can about your job and do it to the best of your ability. And, when you look back at the end, you are going to be very glad that you did.” ■

VIDEO — Skorseth explains the basics of gravel road maintenance:
<http://www.mnltap.umn.edu/publications/videos/gravelroadmaintenance/>

FY 2018 Category F Application Period

The Michigan Department of Transportation, Office of Economic Development, will begin accepting Transportation Economic Development Fund Category F applications for Fiscal Year 2018 on March 1, 2016. Eligible applicants include cities, villages and county road commissions. Proposed projects must be on federal-aid designated routes within a Federal Adjusted Census Urban Boundary located in a county with a population of 400,000 or less. Higher consideration is given to applications that propose improving all-season capabilities on routes having high commercial traffic or those that improve access to state trunklines.

The application deadline for Category F grants is Monday, May 2, 2016. The application and instructions can be accessed at <http://www.michigan.gov/tedf>. For questions, please contact Matt Wiitala at 517-241-2152 or wiitalam@michigan.gov.



Michigan's
Local Technical
Assistance Program

The Center for Technology & Training (CTT) is a part of the Department of Civil & Environmental Engineering at Michigan Technological University in Houghton, Michigan. The mission of the CTT is to develop technology and software, coordinate training and conduct research to support the agencies that manage public infrastructure. In support of this mission, the CTT houses Michigan's Local Technical Assistance Program, which is part of a national effort sponsored by the Federal Highway Administration to help local road agencies manage their roads and bridges. For more information, visit www.ctt.mtu.edu.

The Bridge

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About LTAP

The Local Technical Assistance Program (LTAP) is a nationwide effort funded by the Federal Highway Administration and individual state departments of transportation. The goal of the LTAP effort is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.

Steering Committee

The LTAP Steering Committee makes recommendations on, and evaluations of, the activities of Michigan's LTAP.

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Upcoming Events

Register at ctt.mtu.edu/training

2016 PASER Training (On-site)

April 5 – Gaylord
April 6 – Escanaba
April 7 – Ishpeming

2016 Constructing Pedestrian Facilities for Accessibility

April 5 – Okemos
April 11 – Okemos

WEBINAR: 2016 What's New in Roadsoft Version 7.10

April 12

2016 Transportation Asset Management Conference

April 13 – Dearborn (Detroit)

Roadsoft on the Road

April 19, April 20, April 21

2016 Motor Grader Training

Available by request, May through September

Registration coming soon:

WEBINAR: 2016 Advanced Roadsoft

May/June



2016 Great Ideas Challenge

Michigan LTAP's fourth annual *Great Ideas Challenge* invites you to share your new inventions and practices. Your creative solutions can be a tool or device not available on the market, a process that you've made more efficient or effective, or a technique that you've developed to improve safety.

Winning entries will be featured in Michigan LTAP publications so other agencies can learn from your idea. The first place winner will be automatically entered into the National LTAP Build a Better Mousetrap competition, \$600 toward a transportation-related conference, and \$200 Michigan LTAP bucks. All state, county, municipal, and township road agencies are encouraged to enter. The deadline is May 6th. For more information, visit www.MichiganLTAP.org/GreatIdeas.

An entry form is included in this issue of The Bridge!